UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,105	08/30/2001	Simon Valkenburg	31671-171340	9828

26694 7590 09/20/2004

VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/869,105	VALKENBURG ET AL.	
	Examiner	Art Unit	
	John L. Goff	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on 2/24/04. The previous 35 USC 102 rejection using Schnaars (U.S. Patent 4,997,502) is withdrawn in view of the amendment to the claims.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 4, and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification pages 1-3) in view of Kulie et al. (U.S. Patent 3,410,250) and Haland et al. (U.S. Patent 5,788,270).

The admitted prior art discloses known methods for providing the interior of a fabric air bag with a sealant such as silicone rubber. The admitted prior art teaches a typical process comprises coating the outside of a preformed bag with the sealant followed by turning the bag

inside out. The admitted prior art teaches that the interior coating of sealant ensures the integrity and gas-tightness of the air bag during inflation. The admitted prior art notes however that side-curtain air bags are of a complex form that cannot readily be turned inside out such that the sealant must be applied to the exterior of the bag. In order to achieve acceptable integrity and gas-tightness the admitted prior art teaches that a larger amount of sealant is used to coat the exterior of the bag than is required when the coating is on the interior of the bag resulting in a number of disadvantages such as increased weight of the bag, increased cost of coating the bag, increased tack during inflation resulting in distortion during inflation, etc. (Specification pages 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sealant coating to the interior of the side-curtain air bag taught by the admitted prior art using a well known interior spray coating process such as that shown for example by Kulie et al. to overcome the disadvantages associated with applying the sealant to the exterior of the side-curtain air bag.

Regarding the particulars of the side-curtain air bag, it is noted the admitted prior art teaches a conventional side-curtain air bag as a bag of complex shape having a plurality of inflatable cells (Specification pages 1-3 and Page 7, lines 6-9 of the response filed 2/24/04). However, the admitted prior art does not specifically recite the side-curtain air bag is formed from two fabric materials interconnected by seams wherein the plurality of inflatable cells are separated by seams interwoven from the two fabric materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the conventional side-curtain air bag taught by the admitted prior art from two fabric materials interconnected by seams wherein the plurality of inflatable cells are formed by separated seams interwoven from

the two fabric materials as this was the well known and conventional technique in the art for forming a side-curtain air bag as shown for example by Haland et al. wherein only the expected results, that of providing a conventional side-curtain air bag, would be achieved.

Kulie et al. disclose a spray coating process for applying sealant to the interior surfaces of a container (i.e. an object having a restricted opening) wherein the sealant is applied by a spray nozzle inserted into the container that sprays dry sealant in a propellant gas against heated interior surfaces of the container such that the sealant absorbs the heat from the surfaces to melt and adhere forming a uniform coating (Figure 2 and Column 1, lines 11-20, 49-50, and 54-55 and Column 2, lines 39-45 and 53-55 and Column 5, lines 1-3 and 24-27).

Haland et al. are exemplary of a conventional side-curtain air bag comprising a plurality of inflatable cells wherein the bag is formed from two fabric materials interconnected by seams and the plurality of inflatable cells are formed by separated seams interwoven from the two fabric materials (Figures 1, 6, and 9 and Column 3, lines 28-41 and Column 7, lines 1-7).

Regarding claims 7 and 12, it is noted the admitted prior art as modified by Kulie et al. and Haland et al. teach heating the bag to melt the sealant. However, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to heat either the bag or the propellant gas to melt the sealant, as heating one or the other was conventional in the art with both methods achieving the same result.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Kulie et al., and Haland et al. as applied above in paragraph 4, and further in view of Davis (U.S. Patent 4,994,225).

The admitted prior art, Kulie et al., and Haland et al. as applied above teach all of the limitations in claim 5 except for a specific teaching on the use of different sealants. However, it is noted the admitted prior art is not limited to any particular sealant. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the sealant in the admitted prior art as modified by Kulie et al. and Haland et al. any of the well known and conventional sealants such as polyvinyl chloride, urethanes, etc. for sealing fabric air bags as shown for example by Davis wherein only the expected results would be achieved.

Davis is directed to the production of an air bag. Davis teaches the air bag comprises a fabric bag that is sealed with a polymeric coating that is for example polyvinyl chloride, silicone, urethane, etc. (Column 3, lines 1-5 and 9-11).

6. Claims 1-3, 8-10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Yamauchi (JP 601569032), Haland et al., and Schnaars.

The admitted prior art is described above in full detail. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the sealant coating to the interior of the side-curtain air bag taught by the admitted prior art using a well known interior parison coating process for air bags such as that shown for example by Yamauchi to overcome the disadvantages associated with applying the sealant to the exterior of the side-curtain air bag.

Regarding the particulars of the side-curtain air bag, it is noted the admitted prior art teaches a conventional side-curtain air bag as a bag of complex shape having a plurality of inflatable cells (Specification pages 1-3 and Page 7, lines 6-9 of the response filed 2/24/04). However, the admitted prior art does not specifically recite the side-curtain air bag is formed from two fabric materials interconnected by seams wherein the plurality of inflatable cells are

separated by seams interwoven from the two fabric materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the conventional side-curtain air bag taught by the admitted prior art from two fabric materials interconnected by seams wherein the plurality of inflatable cells are formed by separated seams interwoven from the two fabric materials as this was the well known and conventional technique in the art for forming a side-curtain air bag as shown for example by Haland et al. wherein only the expected results, that of providing a conventional side-curtain air bag, would be achieved. Haland et al. is described above in full detail.

Yamauchi discloses a parison coating process for applying sealant to the interior surfaces of an outer cover material to form an air bag wherein the sealant is applied by placing the outer cover over a parison formed of the sealant (supported on a mandrel) and blow molding the parison (using propellant gas) against the outer cover under heat to bond the sealant with the outer cover (See the abstract). It is noted Yamauchi does not specifically teach that the outer cover material is a completely formed bag. However, applying a parison sealant to the interior of a formed bag is well known in the art as shown for example by Schnaars such that it would have been obvious to one of ordinary skill in the art at the time the invention was made that coating the interior of the side-curtain air bag taught by the admitted prior art as modified by Yamauchi and Schnaars would have included coating the complete formed bag. Furthermore, Yamauchi does not specifically teach using a parison coated with adhesive. However, using adhesive to improve the adherence between the parison and outer cover is known in the art as shown for example by Schnaars such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use in the admitted prior art as modified by Yamauchi and

Schnaars adhesive between the parison and outer cover for improved adhesion wherein either coating the parison with the adhesive or coating the outer cover with adhesive would have been well within the purview of one of ordinary skill in the art as both are well known and conventional methods for applying the adhesive and only the expected results would be achieved.

Schnaars discloses a method for forming a bag with a sealed interior, i.e. an air bag. Schnaars teaches a bag formed of fabric. Schnaars teaches applying a sealant to the interior of the bag by inserting a mandrel into the open end of the bag, inflating the bag, spraying an adhesive/polymer coating onto the interior surface of the bag, and applying a sealant, i.e. plastic liner, onto the interior surface of the bag by blowing a propellant gas into the sealant such that the sealant is affixed to the interior surface of the bag (Figures 4-7 and Column 1, lines 22-23 and 57-68 and Column 2, lines 1-5).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Yamauchi, Haland et al., and Schnaars as applied above in paragraph 6, and further in view of Davis.

The admitted prior art, Yamauchi, Haland et al., and Schnaars as applied above teach all of the limitations in claim 5 except for a specific teaching on the use of different sealants. However, it is noted the admitted prior art is not limited to any particular sealant. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the sealant in the admitted prior art as modified by Yamauchi, Haland et al., and Schnaars any of the well known and conventional sealants such as polyvinyl chloride, urethanes, etc. for sealing

fabric air bags as shown for example by Davis (Davis is described above in full detail) wherein only the expected results would be achieved.

8. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Yamauchi, Haland et al., and Schnaars as applied above in paragraph 6, and further in view of Hobson (U.S. Patent 2,288,454).

The admitted prior art, Yamauchi, Haland et al., and Schnaars as applied above teach all of the limitations in claims 7 and 12 except for a specific teaching of heating the propellant gas during the blow molding step. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the admitted prior art as modified by Yamauchi, Haland et al., and Schnaars to heat the propellant gas during blow molding as this was a well known technique in the art for keeping the parison plastic as shown for example by Hobson.

Hobson discloses blow molding processes for forming hollow articles wherein during blow molding of a parison the propellant gas used is heated to ensure the parison remains plastic, i.e. deformable, soft, etc., during molding (Figures 12-17 and Page 1, column 1, lines 1-10 and Page 3, column 2, lines 23-26 and 70-75 and Page 4, column 1, lines 1-5 and 11-12).

Response to Arguments

9. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection. Regarding applicants arguments to Kulie et al., it is noted Kulie et al. is cited only to show the well known technique of applying a sealant to the interior surfaces of an object having a restricted opening wherein the sealant is applied by a spray

nozzle inserted into the opening that sprays dry sealant in a propellant gas against heated interior surfaces of the object. Regarding applicants arguments to the admitted prior art, it is noted the admitted prior art does not teach away from coating the interior of a side-curtain air bag, rather the admitted prior art teach the disadvantages of coating the exterior of a side-curtain air bag. Regarding applicants arguments to Yamauchi, it is noted Yamauchi is cited only to show the well known technique of parison coating in forming an air bag. Regarding applicants arguments to Davis, it is noted Davis is cited only to show alternative sealants.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John L. Goff

BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700